

Work Order ID 57569



Page 1

April 8, 2010 12:53:18 PM

Item ID: D3146-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket

Start Date: 4/08/10 Start Qty: 6.00



Cust Item ID:

Required Date: 4/16/10 Req'd Qty: 6.00



Customer:

Reference:

10-04-09

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3146

Rev B

100



BAND SAW

0.00

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blanks: 4.500" x 1.250" x 3.100" long Bar

G.A 10/04/12

6 0

110



HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

Machine as per Folio FA419 and Dwg D3146 Identify as D3146-1

G.A 10/04/12

6 0

120



QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

G.A 10/04/12

6 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 57569

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Page 2

Item ID: D3146-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket

Start Date: 4/08/10

Start Qty: 6.00



Cust Item ID:

Required Date: 4/16/10

Req'd Qty: 6.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

MML 10/04/12

6

0

140

Small Fab

0.00



Small Fab

Memo

0.00

Small Fab

Deburr and Tumble

n/AS

150

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

el 10/04/13

X6 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 57569

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Page 3

Item ID: D3146-1

Accept

Revision ID:

Item Name: Bracket

Start Date: 4/08/10

Start Qty: 6.00

Required Date: 4/16/10

Req'd Qty: 6.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 11:00AM OVEN TEMPERATURE:

11:30AM FINISH TIME:

320°

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Inspect work to Step 9

180

Identify as per dwg & Stock Location: 03F

0.00



Packaging

Memo

0.00

Packaging

6/10/14 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April 8, 2010 12:53:17 PM

Page 1

Work Order ID: 57569



Parent Item: D3146-1



Parent Item Name: Bracket

Start Date: 4/08/10

Required Date: 4/16/10

Comments: IPP A 04.04.28 New issue KJ/JLM

Start Qty: 6.00

Required Qty: 6.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M6061T6B1.250X04.50 0		Purchased	No			100	f	32.0000	1.7634			



6061-T6 Bar 1.25 X 4.50

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT10

32

112628

32

1.7634 ^{ft}

N.A 10/04/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	57569
Description: Bracket		Part Number:	D3146-1
Inspection Dwg: D3146	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.000	+/-0.010	3.000	✓			
2.000	+/-0.010	2.000	✓			
0.230	+/-0.010	0.231	✓			
0.425	+/-0.010	0.425	✓			
3.420	+/-0.010	3.420	✓			
2.535	+/-0.010	2.532	✓			
0.221	+/-0.010	0.220	✓			
0.391	+/-0.010	0.385	✓			
0.221	+/-0.010	0.220	✓			
0.850	+/-0.010	0.850	✓			
R0.350	+/-0.010	R0.350	✓			
0.850	+/-0.010	0.850	✓			
0.221	+/-0.010	0.220	✓			
0.491	+/-0.010	0.486	✓			
0.125	+/-0.010	0.129	✓			
1.025	+/-0.010	1.026	✓			
R0.375	+/-0.010	R0.375	✓			
28°	+/-0.5°	28°	✓			
0.276	+/-0.010	0.272	✓			
0.925	+/-0.010	0.923	✓			
R0.125	+/-0.010	R0.125	✓			
4.345	+/-0.010	4.353	✓			
0.125	+/-0.010	0.127	✓			
93°	+/-0.5°	93°	✓			
R0.125	+/-0.010	R0.125	✓			
Grain Direction	N/A	OK	✓			

Measured by: H.A	Audited by: MMU	Prototype Approval:	N/A
Date: 10/04/12	Date: 10/04/12	Date:	N/A

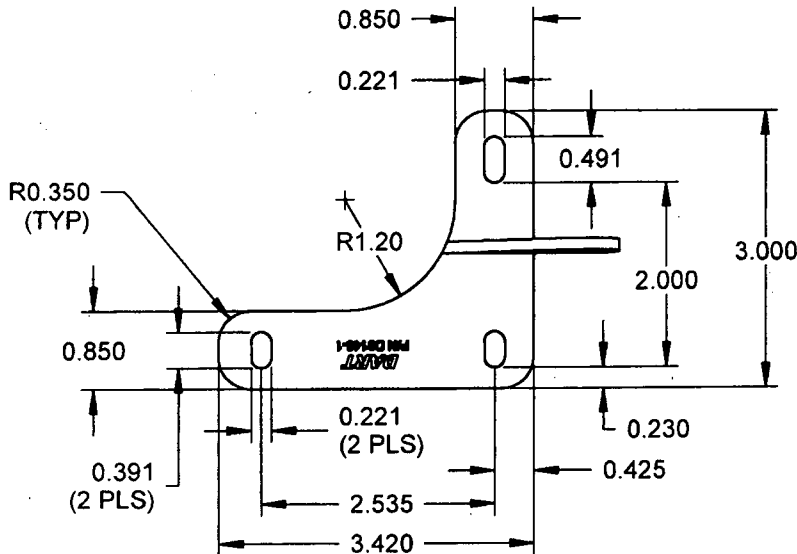
Rev	Date	Change	Revised by	Approved
A	04.06.22	New Issue	KJ/JLM	
B	07.06.13	Dimensions updated per Dwg Rev B	KJ/EC	EA



Lean Training Event

DART

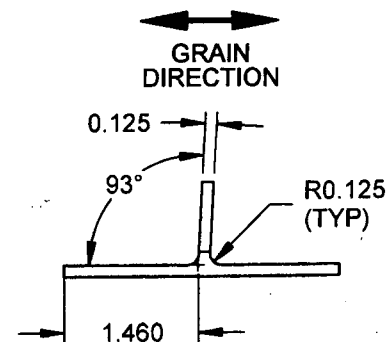
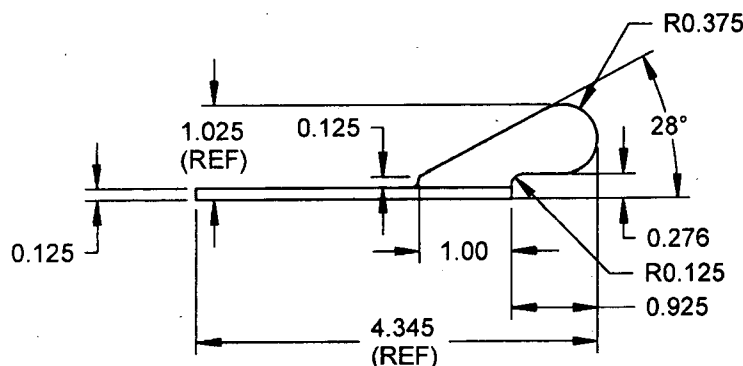
DESIGN #	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED #	DRAWING NO. D3146	REV. B SHEET 1 OF 2
DATE 07.03.28	TITLE BRACKET		SCALE 1:2
REV	DATE	DESCRIPTION	
A	02.04.25	NEW ISSUE	
B	07.03.28	ADD -4; ROTATED LOGO AND P/N	

**RELEASED**

07.06.04 #



w/o 57569



D3146-1 BRACKET SHOWN. REPLACES PREMIER P/N B30-23000-27
(D3146-2 BRACKET OPPOSITE. REPLACES PREMIER P/N B30-23000-28)

NOTES:

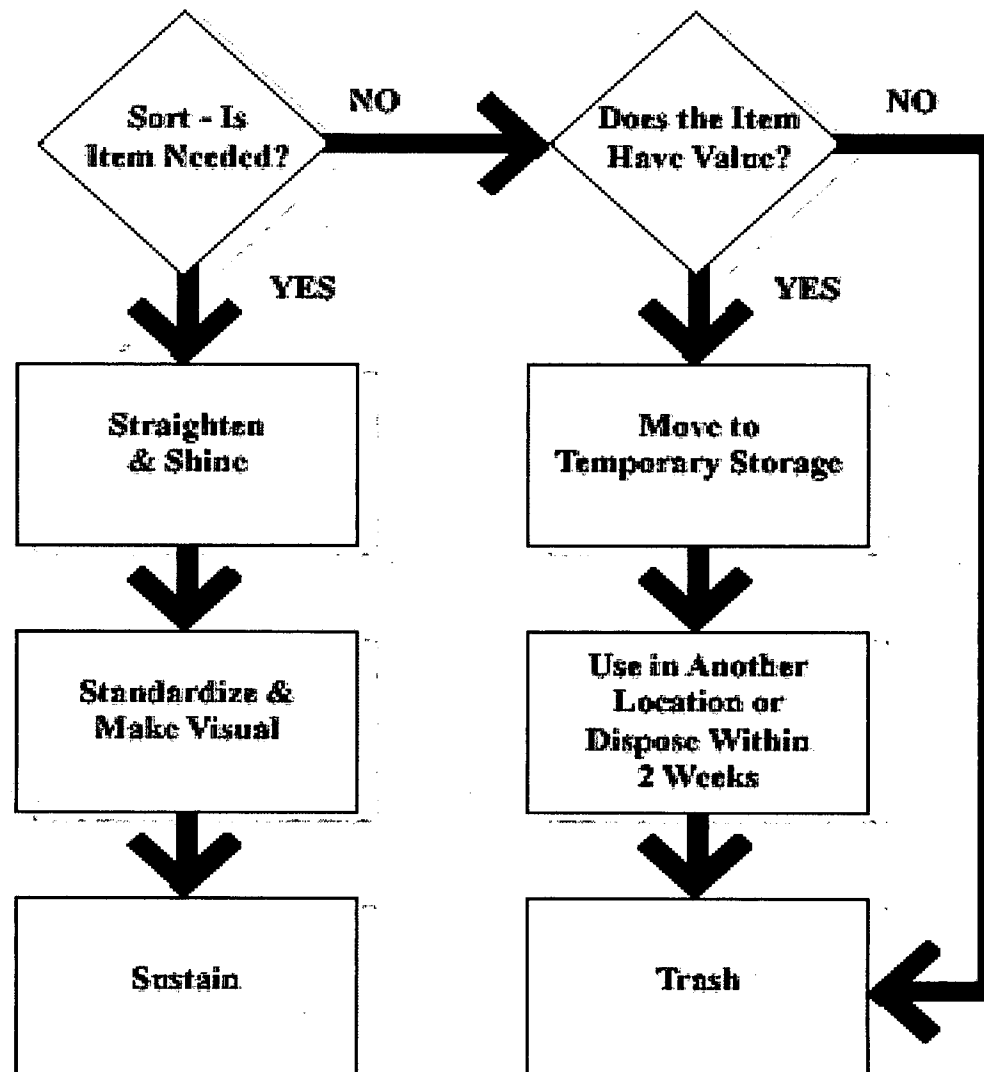
- 1) MATERIAL: 6061-T6/T651 (QQ-A-200/8 OR QQ-A-225/8) BAR (REF. DART SPEC. M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N AND LOGO AS SHOWN

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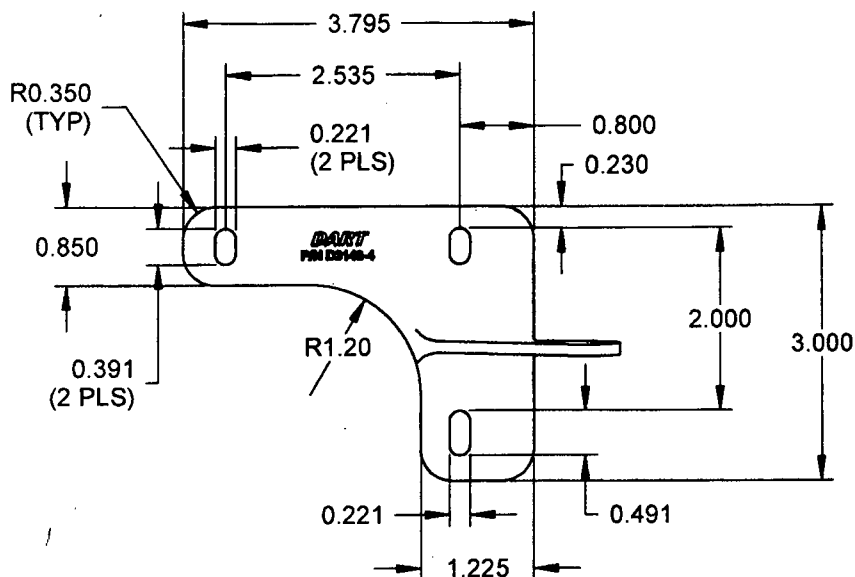
The following chart shows the repeatable 5S system.

5S Flow Chart

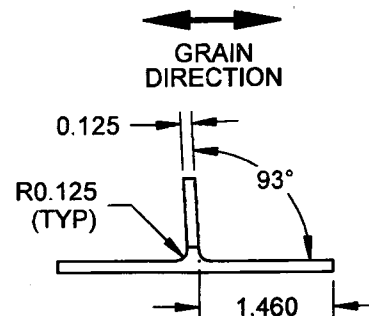
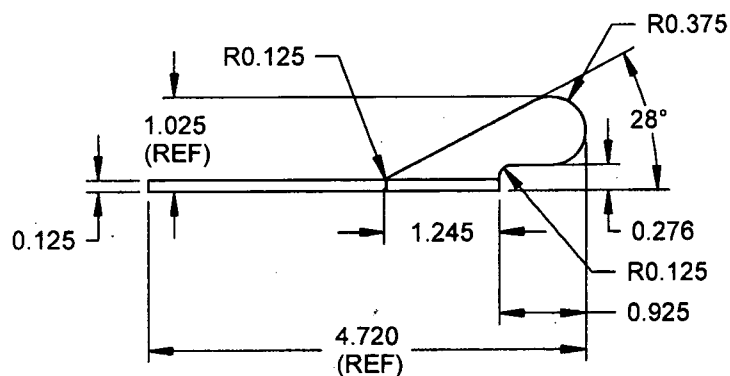
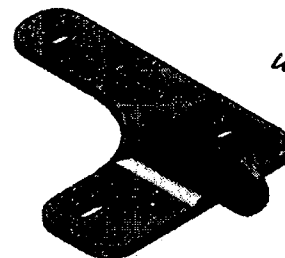


DART

DESIGN #	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED #	DRAWING NO. D3146	REV. B SHEET 2 OF 2
DATE 07.03.28		TITLE BRACKET	SCALE 1:2

**RELEASED**

07.06.04 #

**D3146-4 BRACKET****NOTES:**

- 1) MATERIAL: 6061-T6/T651 (QQ-A-200/8 OR QQ-A-225/8) BAR (REF. DART SPEC. M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N AND LOGO AS SHOWN

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Remember....

- Lean is war to WASTE.
- Waste is an activity or output that ***adds cost but does not add value***
- You have to get into a mindset of identifying and eliminating all wastes.

The 7 deadly wastes

- | | |
|--|--|
| 1. <i>Overproduction</i> | 2. <i>Rework</i> |
| 3. <i>Transportation</i> | 4. <i>Inappropriate / over Processing</i> |
| 5. <i>Unnecessary Inventory</i> | 6. <i>Delays / Waiting</i> |
| 7. <i>Unnecessary Motions</i> | |